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09/942,872	08/30/2001	Robert R. Wampler	38190/233787	9504

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EXAMINER

PEREZ DAPLE, AARON C

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 08/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,872

Applicant(s)

WAMPLER, ROBERT R.

Examiner

Aaron C Perez-Daple

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 3. 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claims 5 and 19 are objected to because of the following informalities: the last two lines of claims 5 and 19 recite the limitation, "in the at least one format of the at least one motion device," where they should recite, "in the at least one format of the operation information of the at least one motion device." Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

((e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato (US 5,757,649).

As for claim 8, Kato discloses a system, a method, and a computer program product for controlling the operation of at least one motion device comprising at least one controllable element, said system comprising:

a setup component [CPU, 111, Fig. 2] capable of extracting process information from electronic simulation information, wherein the electronic simulation information includes information relating to the operation of the at least one motion device, wherein said setup component is further capable of formatting the process information into neutral process

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information [definition tables, col. 3, lines 45-52, "A first aspect...two-dimensional machining shape."], wherein the neutral process information is in a format independent of a format of the electronic simulation information [col. 3, lines 45-65, "A first aspect...condition storing means."]; and

at least one motion command component [defining/determining means, col. 9, line 66 – col. 10, line 19, "The program memory 112...which will be described later."], capable of receiving the neutral process information from said setup component, wherein each motion command component is associated with at least one motion device [107-110, Fig. 1], wherein each motion command component is capable of interpreting the received neutral process information into operation information for the at least one controllable element of each respective motion device [col. 8, lines 43-47, "NC data intrinsic...machining conditions."], wherein the operation information depends on a type of the at least one motion device, and wherein each motion command component is further capable of distributing the operation information to the at least one controllable element of each respective motion device to thereby control the operation of the respective motion devices [col. 8, lines 35-50, "According to the CAD/CAM apparatus...to define machining conditions."; S4, S8, S12, Fig. 20].

4. Claims 1 and 15 are subject to the same limitations as claim 8, therefore the same rejections apply.
5. As for claim 9, Kato discloses, a system according to claim 8, wherein the at least one motion device comprises a plurality of motion devices [107-110, Fig. 1], said setup component is capable of interpreting the neutral process information into operation

information specific to the type of each of the plurality of motion devices [col. 8, lines 35-50, "According to the CAD/CAM apparatus...to define machining conditions."], and wherein each motion command component is capable of distributing the operation information to the at least one controllable element of each respective motion device of the plurality of motion devices [col. 8, lines 35-50, "According to the CAD/CAM apparatus...to define machining conditions."; S4, S8, S12, Fig. 20].

6. Claims 2 and 16 are subject to the same limitations as claim 9, therefore the same rejections apply.
7. As for claim 10, Kato discloses a system according to claim 8, wherein the electronic simulation information comprises electronic simulation information in at least one format [inherent], and wherein said setup component is capable of formatting the process information extracted from the electronic simulation information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information [col. 3, lines 45-65, "A first aspect...condition storing means."].
8. Claims 3 and 17 are subject to the same limitations as claim 10, therefore the same rejections apply.
9. As for claim 11, Kato discloses a system according to claim 11, wherein the at least one motion device operates according to operation information in the at least one format, and wherein each motion command component is capable of interpreting the neutral process information into operation information in the format of each respective motion device [col. 8, lines 35-50, "According to the CAD/CAM apparatus...to define machining conditions."; S4, S8, S12, Fig. 20].

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10. Claims 4 and 18 are subject to the same limitations as claim 11, therefore the same rejections apply.
11. As for claim 12, Kato discloses a system according to claim 8, wherein the electronic simulation information comprises electronic simulation information in at least one format [inherent, col. 3, "A first aspect...condition storing means."], wherein the at least one motion device operates according to operation information in at least one format, wherein said setup component is capable of formatting the process information extracted from the electronic simulation information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information, and wherein each motion command component is capable of interpreting the neutral process information into operation information in the format of each respective motion device [col. 8, lines 35-50, "According to the CAD/CAM apparatus...to define machining conditions."; S4, S8, S12, Fig. 20].
12. Claims 5 and 19 are subject to the same limitations as claim 12, therefore the same rejections apply.
13. As for claim 13, Kato discloses a system according to claim 12, wherein said setup component is capable of formatting the process information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information, and further independent of the at least one format of the operation information of the at least one motion device [col. 3, lines 45-65, "A first aspect...condition storing means."].
14. Claims 6 and 20 are subject to the same limitations as claim 13, therefore the same rejections apply.

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15. As for claim 14, Kato discloses a system according to claim 8, wherein the at least one motion device comprises at least one machine tool [107-10, Fig. 1], and wherein each motion command component is capable of distributing the operation information to each respective machine tool to thereby control the operation of the respective machine tools [col. 8, lines 35-50, "According to the CAD/CAM apparatus...to define machining conditions."; S4, S8, S12, Fig. 20].
16. Claims 7 and 21 are subject to the same limitations as claim 13, therefore the same rejections apply.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 1-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno (US, 6,438,444) in view of Nakamura (US 5,757,648).

As for claim 8, Mizuno teaches a system, a method, and a computer program product for controlling the operation of at least one motion device comprising at least one controllable element, said system comprising:

a setup component [host computer, 2, Fig. 1], wherein said setup component is capable of formatting process information into neutral process information [modules, col. 2, lines 54-67, "Preferably, the external storage...each numerical control device."]; and

at least one motion command component [CPU of numerical control devices #1-n, Fig. 1], capable of receiving the neutral process information from said setup component, wherein each motion command component is associated with at least one motion device [#1-n, Fig. 1], wherein each motion command component is capable of interpreting the received neutral process information into operation information for the at least one controllable element of each respective motion device, wherein the operation information depends on a type of the at least one motion device, and wherein each motion command component is further capable of distributing the operation information to the at least one controllable element of each respective motion device to thereby control the operation of the respective motion devices [col. 5, line 23 – col. 7, line 10, “Referring now to the block diagram...in the volatile memory b.”].

Although obvious to one of ordinary skill in the art, Mizuno does not specifically disclose extracting process information from electronic simulation information using the setup component, wherein the electronic simulation information includes information relating to the operation of the at least one motion device, and wherein the neutral process information is in a format independent of a format of the electronic simulation information.

However, Nakamura teaches extracting process information from electronic simulation information using a setup component, wherein the electronic simulation information includes information relating to the operation of the at least one motion device, and wherein the process information is in a format independent of a format of the electronic simulation information [col. 2, line 6 – col. 3, line 42, “The present invention is...of each machine equipment.”].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mizuno by extracting process information from electronic simulation information using the setup component, as taught by Nakamura, in order to convert CAD machining figure data into an operable machine control program for multiple machine types, as further taught by Nakamura [col. 3, lines 14-30, "According to another aspect...the estimated machining time."].

19. Claims 1 and 15 are subject to the same limitations as claim 8, therefore the same rejections apply.
20. As for claim 9, Mizuno discloses, a system according to claim 8, wherein the at least one motion device comprises a plurality of motion devices [#1-n, Fig. 1], said setup component is capable of interpreting the neutral process information into operation information specific to the type of each of the plurality of motion devices, and wherein each motion command component is capable of distributing the operation information to the at least one controllable element of each respective motion device of the plurality of motion devices [col. 2, line 54 – col. 3, line 24, "Preferably, the external storage...each axis of the machine."].
21. Claims 2 and 16 are subject to the same limitations as claim 9, therefore the same rejections apply.
22. As for claim 10, Mizuno teaches the concept and advantages of using neutral process information to generate specific control software for multiple machine types. However, Mizuno does not specifically teach the extraction of process information from electronic simulation information.

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Nakamura teaches the extraction of process information from electronic simulation information [col. 2, line 5 – col. 3, line 43, “The present invention is...of each machine equipment.”].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mizuno by extracting process information from electronic simulation information, wherein the electronic simulation information comprises electronic simulation information in at least one format, and wherein said setup component is capable of formatting the process information extracted from the electronic simulation information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information in order to convert CAD machining figure data into an operable machine control program for multiple machine types, as taught by Nakamura [col. 3, lines 14-30, “According to another aspect...the estimated machining time.”].

23. Claims 3 and 17 are subject to the same limitations as claim 10, therefore the same rejections apply.

24. As for claim 11, Mizuno discloses a system according to claim 11, wherein the at least one motion device operates according to operation information in the at least one format, and wherein each motion command component is capable of interpreting the neutral process information into operation information in the format of each respective motion device [col. 2, line 54 –col. 3, line 24, “Preferably, the external storage...each axis of the machine.”].

25. Claims 4 and 18 are subject to the same limitations as claim 11, therefore the same rejections apply.

26. As for claims 12 and 13, Mizuno teaches the concept and advantages of using neutral process information to generate specific control software for multiple machine types.

Mizuno further discloses a system similar to that of claim 8, wherein the at least one motion device operates according to operation information in at least one format and wherein each motion command component is capable of interpreting the neutral process information into operation information in the format of each respective motion device and wherein the neutral process information is in a neutral format independent of the at least one format of the operation information of the at least one motion device device [col. 2, line 54 –col. 3, line 24, “Preferably, the external storage...each axis of the machine.”].

Mizuno does not specifically teach the extraction of process information from electronic simulation information. Nakamura teaches the extraction of process information from electronic simulation information [col. 2, line 5 – col. 3, line 43, “The present invention is...of each machine equipment.”].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mizuno by extracting process information from electronic simulation information, wherein the setup component is capable of formatting the process information extracted from the electronic simulation information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information, in order to convert CAD machining figure data into an operable machine control program for multiple machine types, as taught by Nakamura [col. 3, lines 14-30, “According to another aspect...the estimated machining time.”].

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27. Claims 5 and 19 are subject to the same limitations as claim 12, therefore the same rejections apply.
28. Claims 6 and 20 are subject to the same limitations as claim 13, therefore the same rejections apply.
29. As for claim 14, Mizuno discloses a system according to claim 8, wherein the at least one motion device comprises at least one machine tool [#1-n, Fig. 1], and wherein each motion command component is capable of distributing the operation information to each respective machine tool to thereby control the operation of the respective machine tools [col. 2, line 54 – col. 3, line 24, “Preferably, the external storage...each axis of the machine.”].
30. Claims 7 and 21 are subject to the same limitations as claim 13, therefore the same rejections apply.


Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,209,037, note cols. 6-10; US 6,430,740, note cols. 2-6; US 5,933,638, note creation of I/O interface with neutral process information; US 6,473,656, note Fig. 1; US 5,963,450, note common database architecture; US 5,136,222, note Fig. 3; US 6,526,323, note Fig. 5.
32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron C Perez-Daple whose telephone number is (703)305-4897. The examiner can normally be reached on 8am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anil Khatri can be reached on (703)305-0282. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

 8/12/03
Aaron Perez-Daple
August 12, 2003


ANIL KHATRI
PRIMARY EXAMINER